

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

2C MJK
DLI

DATE: August 26, 1983

SUBJECT: Bulk Liquid Disposal Violations at BKK Landfill

FROM: Karen Schwinn
Compliance Officer, T-2-1

TO: File

On August 25, 1983, EPA Region 9 issued notice to the California Department of Health Services under Section 3008(a)(2) of RCRA that BKK was in violation of their Interim Status Document. One of the significant violations cited was with respect to bulk liquid disposal. The requirement which is equivalent to 40 CFR 265.314(a), is found in ISD Section X.4.:

4. Liquid Waste.

- (a) Bulk or non-containerized liquid waste or waste containing free liquids shall not be placed in the landfill, unless:
 - (1) The landfill liner is chemically and physically resistant to the added liquid, and the leachate collection and removal system functions and has a capacity sufficient to remove all leachate produced; or
 - (2) Before disposal, the liquid waste or waste containing free liquids is treated or stabilized, chemically or physically (e.g., by mixing with an absorbent solid), so that free liquids are no longer present.

A joint EPA-State inspection conducted June 8-9, 1983 confirmed that liquid waste is neither stabilized nor treated prior to disposal in the landfill. Thus, 4(a)(1) above must be met; both a liner and a leachate collection and removal system must be present.

The leachate collection and removal system consists of two hydraulic barriers; each with two upgradient extraction wells and several monitoring wells up- and downgradient at varying depths. The liner is reportedly bedrock. Neither the leachate collection system nor the liner has been demonstrated to meet the ISD requirements. Evidence of this violation is as follows:

- (1) Analysis of water in wells below barrier No. 1 indicates abnormally high values of Chemical Oxygen Demand and specific conductance indicative of

leachate contamination (see attached data provided by BKK).

- (2) BKK's Part B permit application submitted to EPA on August 1, 1983 included a chapter on site hydrogeology prepared by LeRoy Crandall & Associates. The following statement is included in the Crandall report:

"They (changes in electrical conductivity and COD) indicate that some leachate is migrating around or beneath the Barrier, probably via the joint and fracture system in the Puente Formation rocks."

- (3) No justification for the barrier locations has been submitted to EPA. Leachate collection is not conducted on the south side of the facility and the topography (drainage) indicates that the potential for leachate here should be examined. It has not been.
- (4) Although the Crandall report was based on existing information, it indicates fracturing of bedrock to depths significantly lower than originally believed by state agencies (80' instead of 30'). This increases the likelihood that leachate could migrate vertically as well as horizontally, move away from the disposal area and not be intercepted by either of the two barriers. This may also mean that the existing wells are not deep enough to adequately monitor or extract all leachate in the barrier area.
- (5) The extraction wells are not pumped with sufficient frequency. A 40' - 50' head has been allowed to accumulate in the wells upgradient of the barriers. It is suspected that this contributes to leachate migration beyond the barriers.